

**A MAGNETIC RANDOM ACCESS MEMORY DEVICE AND A METHOD OF
SWITCHING A MAGNETIC ORIENTATION OF MAGNETIC
MEMORY ELEMENTS THEREIN**

ABSTRACT

An aspect of the present invention is an MRAM device. The MRAM device includes a plurality of magnetic memory elements, a sense line coupled to the plurality of magnetic memory elements for sensing a magnetic orientation of each of the plurality of magnetic memory elements wherein the sense line includes a first via and a second via and wherein the sense line is utilized to thermally assist in switching a magnetic orientation of at least one of the plurality of magnetic memory elements.